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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/715,811	11/17/2000	Krista S. Jacobsen	TI-29917	8094

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EXAMINER

TRAN, KHAI

ART UNIT PAPER NUMBER

2631

DATE MAILED: 04/20/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/715,811

Applicant(s)

JACOBSEN ET AL.

Examiner

KHAI TRAN

Art Unit

2631

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 17 November 2000.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-22 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 22 is/are allowed.
- 6) ☒ Claim(s) 1, 2, 12 and 13 is/are rejected.
- 7) ☒ Claim(s) 3-11 and 14-21 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Drawings

1. Figure 1 should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g). A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

4. Claims 1-2, 12-13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tate et al (U.S. Pat. 6,650,697).

Regarding claim 1, Tate et al disclose a method upstream power back-off in a broadband communication system, comprising: determining an upstream an upstream transmit power spectral density prior to upstream data transmission using the transmitted GDR PSD (col. 10, lines 12-60, showing that a subscriber unit (CPE) modem determines the PSD from the training sequence, or an informed (or "communicative") method where information exchange between the CPE and LTE modems is require, and the PSD for upstream transmission by the CPE modem is determined by either the CPE modem or the LTE modem); providing a management system enabling operator configuration of the GDR PSD (col. 10, lines 21-42, a management system 69). Tate et al fail to explicitly disclose transmitting a global desired receive power spectral density (GDR PSD). However, Tate et al disclose that a first modem transmitting a training sequence, the training sequence is used to determine upstream transmission by the CPE modem (col. 9, line 22 to col. 10, line 60). It would have been obvious to one having ordinary skill in the art at time the invention was made to transmit a desired power spectral density as training sequence as taught by Tate et al for performing a noise reduction due to different power levels.

Regarding claim 2, Tate et al disclose an associated line termination interface to a network terminal interface (col. 4, lines 32-42).

Claims 12-13 are similar to claims 1-2. Therefore, claims 12-13 are rejected under a similar rationale.

Allowable Subject Matter

5. Claim 22 is allowed.

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6. Claims 3-11, 14-19 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

7. The following is a statement of reasons for the indication of allowable subject matter: Tate et al fail to disclose a method of upstream power back-off in a broadband communication system comprising at least two transmission loops of differing lengths, the method comprising: the network termination type interface further enabling determination of an upstream transmit power spectral density defined as:

$$S(f) = \frac{L_r S_{GDR}(f)}{L_i |H(f)|^2},$$

where L_i is a determined length of a transmission loop associated with the network termination type interface, $|H(f)|^2$ is an estimated insertion loss of the associated transmission loop, and $S_{GDR}(f)$ represents the GDR PSD defined as:

$$S_{GDR}(f) = \frac{\eta(f)}{L_r \cdot K_{FEXT} \cdot f^2}$$

where $\eta(f)$ is an assumed reference noise profile, L_r is a nominal loop length, and K_{FEXT} is a constant representing the coupling from a first loop to an adjacent loop in communication system.

Conclusion

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Shastri et al (U.S. Pat. 6,128,350) disclose a method and an apparatus for reducing peak to average power ratio in digital broadcasting system.

Jacobsen et al (U.S. Pat. 6,205,220) disclose a method to mitigate the NEAR-FAR FEXT problem.

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to KHAI TRAN whose telephone number is (703) 305-1876. The examiner can normally be reached on 7:00AM - 4:30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mohammed Ghayour can be reached on (703) 306-3034. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

KT
April 16, 2004


KHAI TRAN
PATENT EXAMINER